

Appl. No. 09/479,302  
Reply to Office action of 5/21/2004

Page 2

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

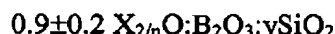
**Listing of Claims:**

Claim 1 (currently amended): A layered crystalline metallosilicate composite wherein layers are contiguous, compositionally heterogeneous and of a single zeolitic isotype and comprise:

- (a) a catalytically active core comprising a zeolitic aluminosilicate selected from the group consisting of MFI, MEL, MTW and TON having a  $\text{SiO}_2:\text{Al}_2\text{O}_3$  ratio below 45; and,
- (b) a mantle comprising a crystalline metallosilicate consisting essentially of boralite which comprises a framework metal selected from one or more of the group consisting of boron, indium, gallium and iron consisting essentially of boron.

Claims 2-5 (canceled)

Claim 6 (currently amended): The composite of Claim ~~[[5]]~~ 1 wherein the crystalline metallosilicate of (b) is characterized by an empirical chemical composition on an anhydrous basis expressed by the formula:



where X is a cation of valence n and y is between about 4 and 500.

Claim 7 (original): The composite of Claim 1 wherein the crystalline metallosilicate composite consists essentially of:

- (a) a catalytically active core comprising a zeolitic aluminosilicate, and,
- (b) a mantle comprising a crystalline boralite.

Claims 8-9 (canceled)

Claim 10 (currently amended): The composite of Claim ~~[[9]]~~ 1 further comprising, consisting essentially of a catalytically active core comprising a zeolitic aluminosilicate having a  $\text{SiO}_2:\text{Al}_2\text{O}_3$  ratio between 25 and 40, a mantle comprising a crystalline boralite, and an aluminum phosphate binder.

Claims 11-13 (canceled)

Appl. No. 09/479,302  
Reply to Office action of 5/21/2004

Page 3

**Claim 14 (original):** A process for the disproportionation of a toluene-containing feedstock comprising contacting the feedstock with a layered crystalline metallosilicate composite wherein layers are contiguous, compositionally heterogeneous and of an MFI isotype and comprise:

- (a) a catalytically active core comprising a zeolitic aluminosilicate, having a  $\text{SiO}_2:\text{Al}_2\text{O}_3$  ratio less than about 45 and,
- (b) a mantle comprising a crystalline boralite;

in a disproportionation zone at disproportionation conditions to obtain a paraxylene-rich product.

**Claim 15 (original):** The process of Claim 14 wherein the disproportionation conditions comprise a temperature of from about 200° to 600°C, a pressure of from about 100 kPa to 6 MPa absolute, and a liquid hourly space velocity of from about 0.2 to 10  $\text{hr}^{-1}$ .

**Claim 16 (original):** The process of Claim 15 wherein free hydrogen is present in a molar ratio to feedstock hydrocarbons of about 0.5 to 10.

**Claim 17 (original):** The process of Claim 14 wherein the composite consists essentially of a catalytically active core comprising a zeolitic aluminosilicate having a  $\text{SiO}_2:\text{Al}_2\text{O}_3$  ratio between about 20-40, a mantle comprising a crystalline boralite, and an aluminum phosphate binder.

**Claim 18 (original):** The process of Claim 14 wherein the product contains paraxylene in excess of its equilibrium concentration at disproportionation conditions.

**Claim 19 (original):** The process of Claim 14 further comprising deposition at precoking conditions of between about 5 and 40 mass-% carbon on the composite prior to its use for disproportionation of the feedstock.

**Claim 20 (original):** The process of Claim 19 wherein the precoking conditions comprise a temperature at least about 90°C higher than utilized in the subsequent disproportionation.